

CLAIMS

What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. An image processing apparatus, comprising:
 - a scanning mechanism configured to read images;
 - a first memory storing a reference dot pattern indicating an anti-copy background dot pattern;
 - a second memory storing image data;
 - an image accumulating mechanism configured to accumulate image data of an original image which is read by the scanning mechanism into the second memory;
 - a detecting mechanism configured to detect a background dot pattern embedded in a background image included in said image data of said original image accumulated in said second memory;
 - a determining mechanism configured to compare said detected background dot pattern with said reference dot pattern stored in said first memory and to determine whether said detected background dot pattern is substantially identical to said reference dot pattern; and
 - a code assigning mechanism configured to assign an identification code to said image data having said detected background dot pattern and accumulated in said

second memory when said detected background dot pattern is determined by said determining mechanism as substantially identical to said reference dot pattern.

2. The image processing apparatus of claim 1, further comprising:

a communications mechanism configured to transmit to a specific computer information indicative of a determination result from said determining mechanism and said identification code assigned to said image data having said detected background dot pattern when said detected background dot pattern is determined by said determining mechanism as substantially identical to said reference dot pattern.

3. The image processing apparatus of claim 1, further comprising:

a communications mechanism configured to encipher said image data having said detected background dot pattern and stored in said second memory when said detected background dot pattern is determined by said determining mechanism as substantially identical to said reference dot pattern and to transmit to a specific computer information indicative of a determination result from said determining mechanism and said enciphered image data as well as said identification code assigned to said image data having said detected background dot pattern.

4. The image processing apparatus of claim 2, wherein said communications mechanism transmits to said specific computer said information indicative of a determination result from said determining mechanism and said enciphered image data

as well as said identification code assigned to said image data having said detected background dot pattern.

5. The image processing apparatus of claim 1, further comprising:
 - an information inputting mechanism configured to receive user input, said user input including said identification code; and
 - a reproducing mechanism configured to reproduce said image data to which said identification code is assigned when said information inputting mechanism receives said user input of said information including said identification code.

6. The image processing apparatus of claim 1, further comprising:
 - an information inputting mechanism configured to receive user input, said user input including said identification code and an identification of a specific user;
 - an information verifying mechanism configured to verify said identification code and said identification of said specific user; and
 - a reproducing mechanism configured to reproduce said image data to which said identification code is assigned when said information inputting mechanism receives said user input of said information including said identification code and said identification of said specific user and when said information verifying mechanism correctly verifies said identification code and said identification of said specific user.

7. An image processing apparatus, comprising:
 - scanning means for reading images;

storing means for storing a reference dot pattern indicating an anti-copy background dot pattern and image data; accumulating means for accumulating image data of an original image which is read by said scanning mechanism into said storing means; detecting means for detecting a background dot pattern embedded in a background image included in said image data of said original image accumulated in said storing means; determining means for comparing said detected background dot pattern with said reference dot pattern stored in said storing means and determining whether said detected background dot pattern is substantially identical to said reference dot pattern; and assigning means for assigning an identification code to said image data having said detected background dot pattern and accumulated in said storing means when said detected background dot pattern is determined by said determining means as substantially identical to said reference dot pattern.

8. The image processing apparatus of claim 7, further comprising communicating means for transmitting to a specific computer information indicative of a determination result from said determining means and said identification code assigned to said image data having said detected background dot

pattern when said detected background dot pattern is determined by said determining means as substantially identical to said reference dot pattern.

9. The image processing apparatus of claim 7, further comprising:
communicating means for enciphering said image data having said detected background dot pattern and stored in said storing means when said detected background dot pattern is determined by said determining means as substantially identical to said reference dot pattern and transmitting to a specific computer information indicative of a determination result from said determining means, said enciphered image data, and said identification code assigned to said image data having said detected background dot pattern.

10. The image processing apparatus of claim 8, wherein said communicating means transmits to said specific computer said information indicative of a determination result from said determining means, and said enciphered image data, and said identification code assigned to said image data having said detected background dot pattern.

11. The image processing apparatus of claim 7, further comprising:
inputting means for receiving user input, said user input including said identification code; and

reproducing means for reproducing said image data to which said identification code is assigned when said information inputting means receives said user input of said information including said identification code.

12. The image processing apparatus of claim 7, further comprising:
inputting means for receiving user input, said user input including said identification code and an identification of a specific user;
verifying means for verifying said identification code and said identification of said specific user; and
reproducing means for reproducing said image data to which said identification code is assigned when said inputting means receives said user input of said information including said identification code and said identification of said specific user and when said verifying means correctly verifies said user input including said identification code and said identification of said specific user.

13. An image processing method, comprising:
storing a reference dot pattern indicating an anti-copy background dot pattern and image data;
reading an original image;
accumulating image data of said original image read by said reading step;
detecting a background dot pattern embedded in a background image included in said image data of said original image accumulated by said accumulating step;

comparing said background dot pattern detected by said detecting step with said reference dot pattern stored by said storing step;

determining whether said detected background dot pattern is substantially identical to said reference dot pattern; and

assigning an identification code to said image data having said detected background dot pattern and accumulated by said accumulating step when said detected background dot pattern is determined by said determining step as substantially identical to said reference dot pattern.

14. The image processing method of claim 13, further comprising:
transmitting to a specific computer information indicative of a determination result from said determining step and said identification code assigned to said image data having said detected background dot pattern when said detected background dot pattern is determined by said determining step as substantially identical to said reference dot pattern.

15. The image processing method of claim 13, further comprising:
enciphering said image data having said detected background dot pattern and stored by said storing step when said detected background dot pattern is determined by said determining step as substantially identical to said reference dot pattern; and
transmitting to a specific computer information indicative of a determination result from said determining step and said enciphered image data as well as said

identification code assigned to said image data having said detected background dot pattern.

16. The image processing method of claim 14, wherein said transmitting step transmits to said specific computer said information indicative of a determination result from said determining step, said enciphered image data, and said identification code assigned to said image data having said detected background dot pattern.

17. The image processing method of claim 13, further comprising:
receiving user input, said user input including said identification code; and
reproducing said image data to which said identification code is assigned when
said receiving step receives said user input.

18. The image processing method of claim 13, further comprising:
receiving user input, said user input including said identification code and an
identification of a specific user;
verifying said identification code and said identification of said specific user; and
reproducing said image data to which said identification code is assigned when
said receiving step receives said user input of said information including said
identification code and said identification of said specific user and when said verifying
step correctly verifies said identification code and said identification of said specific
user.

19. A computer program product stored on a computer readable storage medium for carrying out an image processing method, when run on an image processing apparatus, said method comprising the steps of:

storing a reference dot pattern indicating an anti-copy background dot pattern and image data;

reading an original image;

accumulating image data of said original image read by said reading step;

detecting a background dot pattern embedded in a background image included in said image data of said original image accumulated by said accumulating step;

comparing said background dot pattern detected by said detecting step with said reference dot pattern stored by said storing step;

determining whether said detected background dot pattern is substantially identical to said reference dot pattern; and

assigning an identification code to said image data having said detected background dot pattern and accumulated by said accumulating step when said detected background dot pattern is determined by said determining step as substantially identical to said reference dot pattern.

20. The product according to claim 19, wherein said method further comprises:

transmitting to a specific computer information indicative of a determination result made by said determining step and said identification code assigned to said image data having said detected background dot pattern when said detected background dot pattern is determined by said determining step as substantially identical to said reference dot pattern.

21. The product according to claim 19, said method further comprising:
enciphering said image data having said detected background dot pattern and stored by said storing step when said detected background dot pattern is determined by said determining step as substantially identical to said reference dot pattern; and
transmitting to a specific computer information indicative of a determination result made by said determining step and said enciphered image data as well as said identification code assigned to said image data having said detected background dot pattern.

22. The product according to claim 20, wherein said transmitting step transmits to said specific computer said information indicative of a determination result made by said determining step and said enciphered image data as well as said identification code assigned to said image data having said detected background dot pattern.

23. The product according to claim 19, said method further comprising:
receiving user input, said user input including said identification code; and

reproducing said image data to which said identification code is assigned when
said receiving step receives said user input of said information including said
identification code.

24. The product according to claim 19, said method further comprising:
receiving user input, said user input including said identification code and an
identification of a specific user;
verifying said identification code and said identification of said specific user; and
reproducing said image data to which said identification code is assigned when
said receiving step receives said user input, and when said verifying step correctly
verifies said identification code and said identification of said specific user.

25. A computer readable medium storing computer instructions for
performing an image processing method, said method comprising:
storing a reference dot pattern indicating an anti-copy background dot pattern
and a first image data;
reading an original image;
accumulating a second image data of said original image read by said reading
step;
detecting a background dot pattern embedded in a background image included
in said second image data of said original image accumulated by said accumulating
step;

comparing said background dot pattern detected by said detecting step with said reference dot pattern stored by said storing step;

determining whether said detected background dot pattern is substantially identical to said reference dot pattern; and

assigning an identification code to said second image data having said detected background dot pattern and accumulated by said accumulating step when said detected background dot pattern is determined by said determining step as substantially identical to said reference dot pattern.

26. The storage medium according to claim 25, wherein said method further comprising:

transmitting to a specific computer information indicative of a determination result made by said determining step and said identification code assigned to said second image data having said detected background dot pattern when said detected background dot pattern is determined by said determining step as substantially identical to said reference dot pattern.

27. The storage medium according to claim 25, wherein said method further comprising:

enciphering said second image data having said detected background dot pattern and stored by said storing step when said detected background dot pattern is

determined by said determining step as substantially identical to said reference dot pattern; and

transmitting to a specific computer information indicative of a determination result made by said determining step and said enciphered image data as well as said identification code assigned to said image data having said detected background dot pattern.

28. The storage medium according to claim 26, wherein said transmitting step transmits to said specific computer said information indicative of a determination result made by said determining step, and said enciphered image data, and said identification code assigned to said second image data having said detected background dot pattern.

29. The storage medium according to claim 25, wherein said method further comprising:

receiving user input, said user input including said identification code; and
reproducing said second image data to which said identification code is assigned
when said receiving step receives said user input of said information including said identification code.

30. The storage medium according to claim 25, said method further comprising:

receiving user input, said user input including said identification code and an identification of a specific user;

verifying said identification code and said identification of said specific user; and
reproducing said image data to which said identification code is assigned when
said receiving step receives said user input of said information including said
identification code and said identification of said specific user and when said verifying
step correctly verifies said identification code and said identification of said specific
user.